

***Cerodontha rohdendorfi* Nowakowski and *Cerodontha staryi* (Starý) (Diptera: Agromyzidae) new to Britain**

DAVID GIBBS

6 Stephen Street, Redfield, Bristol BS5 9DY davidgibbs@aol.com

Abstract

The addition to the British species list of two leaf-mining flies of the genus *Cerodontha* subgenus *Butomomyza*, *Cerodontha rohdendorfi* Nowakowski and *Cerodontha staryi* (Starý) found in Scotland and Gloucestershire respectively, is reported.

***Cerodontha rohdendorfi* Nowakowski**

This species was first noticed in Britain by Peter Chandler who collected a male in Argyll in 1974 although its identity was only recognised in 2002. This year eight more specimens came to light while I was identifying Malaise caught material collected along the River Nethy on Speyside in 1999.

Identification: using Spencer (1972) specimens run to subgenus *Dizygomyza* (which then included *Butomomyza*), then to *C. angulata* (Loew) from which it differs externally only in the slightly shorter apical part of M3+4. Using the key to subgenus *Butomomyza* in Spencer (1976) it runs easily to couplet 4(2) where it only just falls within the first part of the couplet, males having a wing length of up to 2.4mm. At this point *C. rohdendorfi* is separated on the length of the apical part of M3+4 relative to the penultimate part. In some specimens the apical part of M3+4 is quite short but in others it is close to three quarters the length of the penultimate part so would run to *C. angulata*.

The genitalia provide the only certain means of identification. The aedeagus is similar to that of *C. angulata*, *C. mellita* Spencer and *C. scutellaris* (von Roser) but in *C. rohdendorfi* the proximal part of the distiphallus is conspicuously longer before the first bend. It also differs in numerous details of the mesophallus and basiphallus (Fig. 1). The epandrium of *C. rohdendorfi* is very distinctive having the ventral corners roundly swollen and rather shiny, the spines of the surstylus being displaced upwards

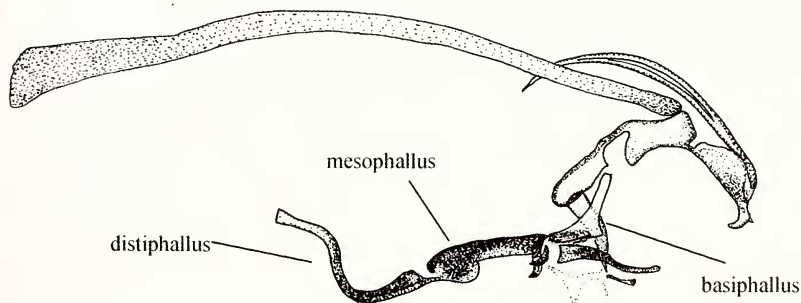


Fig. 1. *Cerodontha rohdendorfi* aedeagus and aedeagal apodeme.

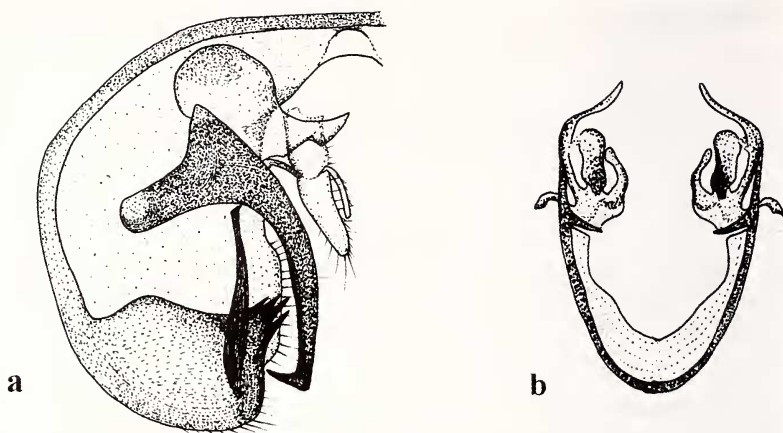


Fig. 2 *Cerodontha rohdendorfi* genitalia, (a) internal view of epandrium, (b) sternite 9.

(Fig. 2a). Dorsally, just above the bases of the cerci, is a low swelling, but this is variable and barely visible in some specimens.

Biology: on the continent this species is known to mine the leaves of *Poa chaixii* Villars, *Festuca pratensis* Hudson and probably related species, unusual in this subgenus as all other *Butomomyza* are associated with *Carex* spp. (Spencer, 1990). They form a mine in the upper or lower surfaces, filling the whole leaf blade. The British specimens examined came from an oakwood and from a river bank in Caledonian pine forest. On the continental mainland it is only known from Finland and Poland (Spencer, 1976).

British specimens examined.

SCOTLAND, Argyllshire, Kenna Craig, 11 July 1974, 1♂ P.J.Chandler.

SCOTLAND, Grampian, Abernethy Forest RSPB Reserve, River Nethy, 19 June to 5 July 1999 5♂ RSPB.

SCOTLAND, Grampian, Abernethy Forest RSPB Reserve, River Nethy, 5 to 19 July 1999 3♂ RSPB.

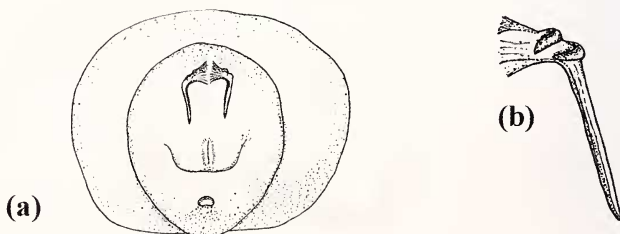


Fig. 3. *Cerodontha staryi* puparium, (a) rear view, (b) posterior spiracular process.

Cerodontha staryi (Starý)

During a Gloucestershire Invertebrate Group field meeting at Strawberry Banks Nature Reserve in April 2003 I found three mines in the leaves of a *Carex* plant. All the larvae had pupated in the mines so in order to preserve the leaves with the mines I removed the three puparia and placed them in a 30ml glass tube in the hope of rearing them. On examination of the puparia it transpired that there were two species present, a single *Cerodontha caricicola* (Hering) and two with remarkably elongated rear spiracular processes. Both Hering (1957) and Nowakowski (1973) illustrated the puparia of numerous species and the only one exhibiting this modified spiracular process is *Cerodontha staryi*. As far as can be discovered this elongation of the rear spiracular processes is unique to *C. staryi* (M. von Tschirnhaus *pers comm.*), certainly no other *Carex* feeding species are known to possess such a character.

Unfortunately neither of the puparia produced adult flies, one seemed to become mouldy and the other was parasitised by a chalcid. Searches for further puparia in spring 2004 were not successful.

Identification: the long processes of the puparium are diagnostic (Fig. 3). For identification of adults see Nowakowski (1973). No adults have been examined but in Spencer (1976) *C. staryi* should run to couplet 3 where it is most similar to *C. scutellaris* from which it is separable by examination of the genitalia.

Biology: host *Carex*, Nowakowski (1973) give *Carex sylvatica* Hudson, *Carex pallescens* L. and *Carex remota* L., all species which are associated with woodland. The Gloucestershire specimens were in *Carex sylvatica* growing along a track in beech woodland on the Cotswold limestone. *Cerodontha staryi* is a rare species with only a few records, all from Central Europe (M. von Tschirnhaus *pers comm.*).

British specimens examined.

ENGLAND, Gloucestershire, Strawberry Banks nature reserve, 12 April 2003 two puparia.

Acknowledgements

The author is very grateful to Peter Chandler for the loan of his specimen of *C. rohdendorfi* and to Dr Michael von Tschirnhaus for his comments on *C. staryi*. I would also like to thank the Royal Society for the Protection of Birds for providing the Malaise samples and the Gloucestershire Wildlife Trust for access to their Strawberry Banks nature reserve.

References

- Hering, E.M. 1957. *Bestimmungstabellen der Blattminen von Europa*. Vol. 1 & 3. Dr W. Junk, s-Gravenhage.
- Nowakowski, J.T. 1973. Monographie der europäischen Arten der Gattung *Cerodontha* Rond. (Diptera, Agromyzidae). *Annales zoologici, Warszawa*. 31: 1–327.
- Spencer, K.A. 1972. Diptera, Agromyzidae. *Handbooks for the Identification of British Insects*. Vol. X, part 5(g), Royal Entomological Society.
- Spencer, K.A. 1976. The Agromyzidae (Diptera) of Fennoscandia and Denmark. *Fauna Entomologica Scandinavica* 5 part 1, 304pp.
- Spencer, K.A. 1990. Host specialization in the world Agromyzidae (Diptera). *Series Entomologica* 45, 1–444. Kluwer Academic Publishers.